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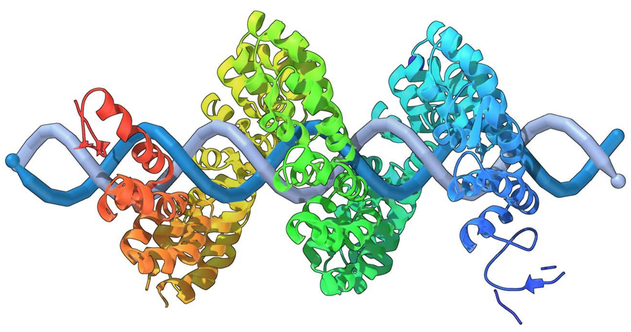
A PREVIEW TO ADENITA: MODELING AND VISUALIZATION OF DNA NANOSTRUCTURES

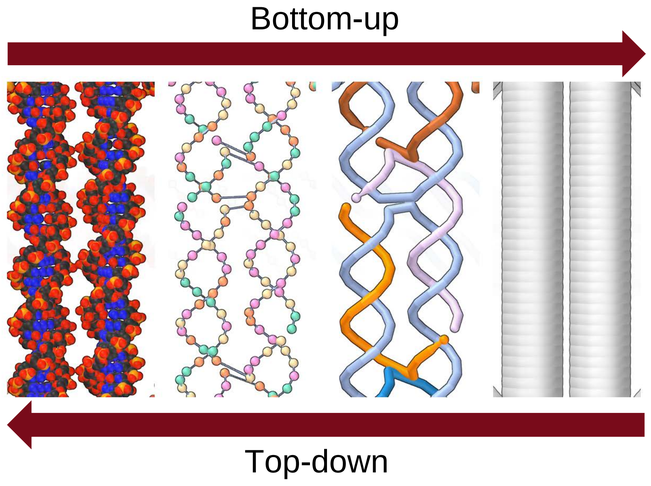
AUSTRIAN INSTITUTE OF TECHNOLOGY
TOMORROW TODAY

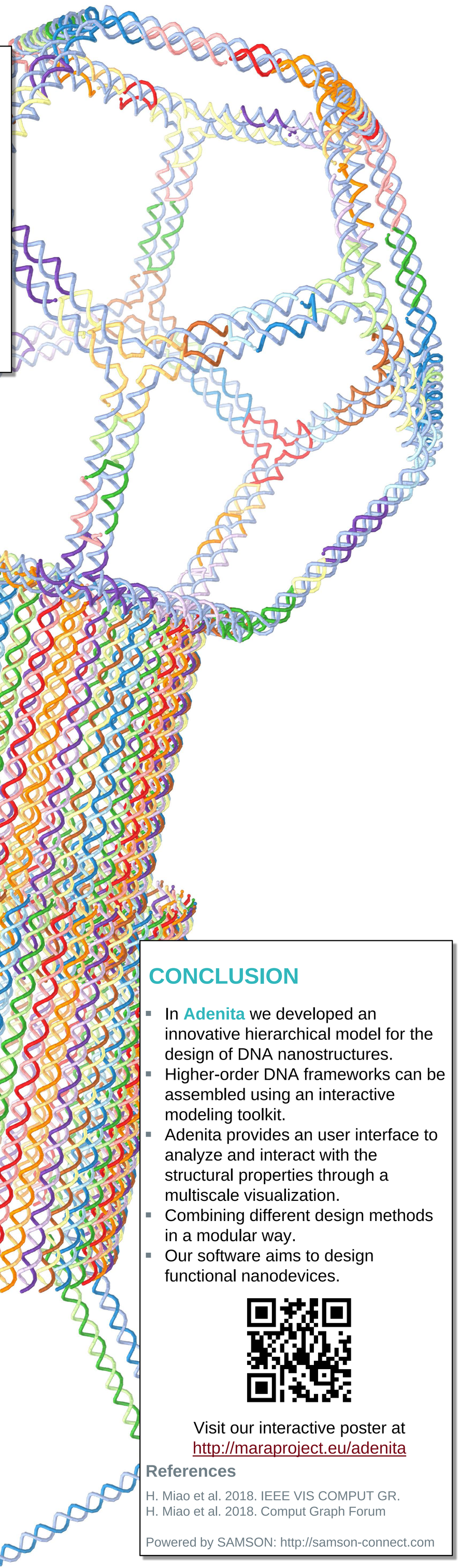
INTRODUCTION

Adenita is an interactive modeling and visualization software for the design of large scale DNA nanostructures.

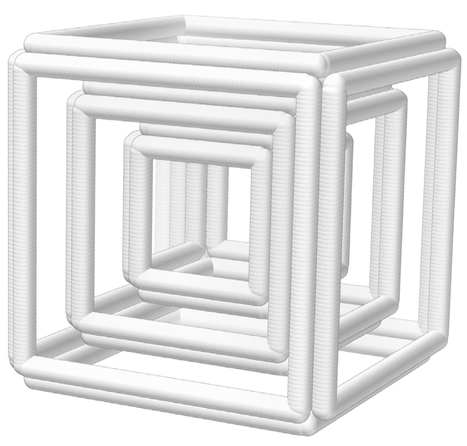


METHOD: An unified DNA Model





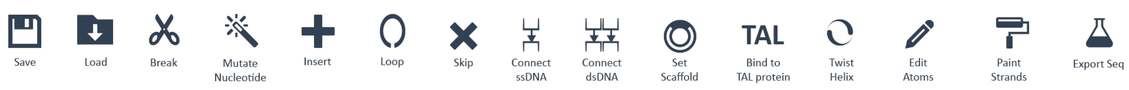
CREATE rapidly parametrized DNA nanostructures

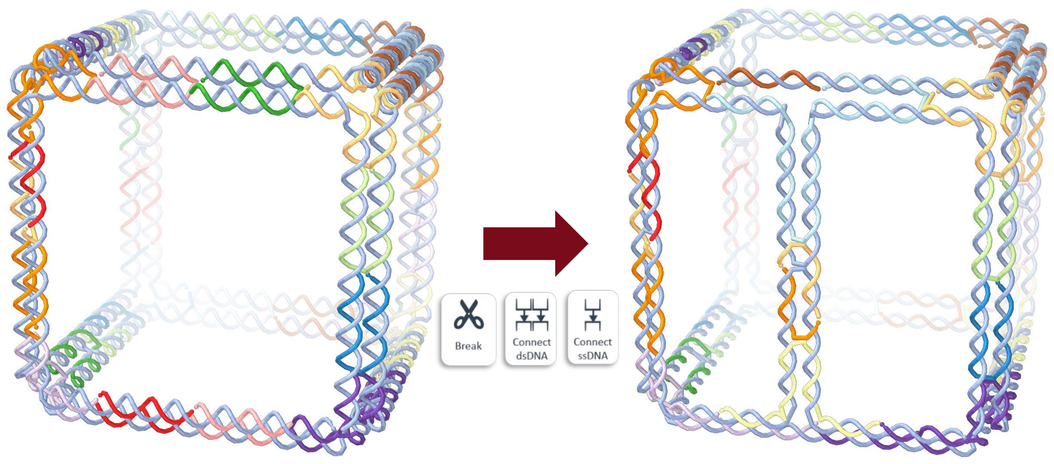


wireframes

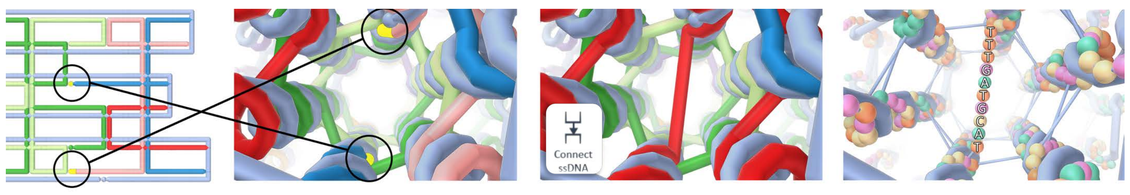
nanotubes

MODIFY existing nanostructures with a large toolkit



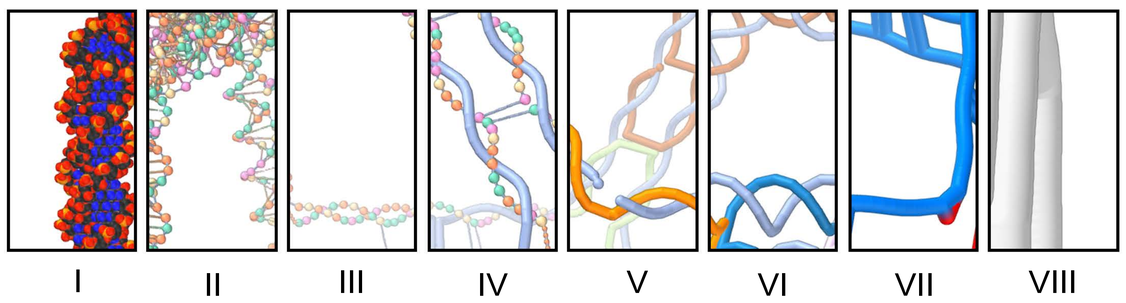


Overcome limitations of automatically generated DNA nanostructures



caDNAno input | 3D view (scale VI) | modify in 3D | 3D view (scale IV)

VISUALIZE with a novel multiscale concept



CONCLUSION

- In **Adenita** we developed an innovative hierarchical model for the design of DNA nanostructures.
- Higher-order DNA frameworks can be assembled using an interactive modeling toolkit.
- Adenita provides an user interface to analyze and interact with the structural properties through a multiscale visualization.
- Combining different design methods in a modular way.
- Our software aims to design functional nanodevices.

Visit our interactive poster at
http://maraproject.eu/adenita

References

H. Miao et al. 2018. IEEE VIS COMPUT GR.
H. Miao et al. 2018. Comput Graph Forum

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